

DETAILED ACTION

1. The after final amendment filed on 3/03/09 has been entered and fully evaluated.
2. After carefully reviewing US Patent 7, 468, 948 which is also owned by the Applicant, the Examiner has determined that there is no double patenting issue between the claims of the patented application and the claims of the instant application. The patented case never claims timeslot or discloses timeslots in the specification and the claimed time intervals or time locations in the patented application are not necessarily cyclic or periodic and significantly differ from timeslot widely used in the art and claimed in the instant application because timeslots are always cyclic or periodic. Further the patented application claims initially selecting time locations that are coarsely spaced apart in time and further fine tuned to selecting time locations that are finely spaced apart in time. The Examiner position has been communicated to the Applicant as noted in the attached Examiner Initiated Interview Summary.
3. **Claims 1 and 3-37** are allowed.
4. The following is an examiner's statement of reasons for allowance:

Claim 1 and all of its dependent claims are allowable over the prior art of record since the cited references taken individually or in combination fail to particularly teach or suggest a method of transmitting packets over an Internet Protocol (IP) or Ethernet packet-switched network, comprising the steps of:

(1) transmitting from a network endpoint a plurality of test packets over the network during a plurality of different time slots, wherein each test packet has a priority level that is lower than a priority level assigned to data packets that are to

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be transmitted between endpoints on the network, and wherein the test packets are transmitted so as to emulate data packets that

are to be transmitted between the endpoints on the network;

(2) on the basis of step (1), evaluating which of the plurality of different time slots corresponds to favorable network traffic conditions; and

(3) transmitting a plurality of data packets comprising one or more of voice data, video data, and TDM-over-IP data over the network at a priority level higher than the test packets using one or more favorable time slots evaluated in step (2).

Claim 15 and all of its dependent claims are allowable over the prior art of record since the cited references taken individually or in combination fail to particularly teach or suggest in an Internet Protocol (IP) or Ethernet network comprising a plurality of packet switches, a method of transmitting data packets, comprising the steps of:

(1) establishing a time reference frame comprising a plurality of time slots during which packets are to be transmitted across the network between two network endpoints;

(2) from a first network endpoint, empirically determining which of the plurality of time slots is associated with a reduced level of packet contention with respect to an intended second network endpoint ; and

(3) synchronously transmitting a plurality of data packets comprising one or more of voice data, video data, and TDM-over-IP data from the first network endpoint

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to the second network endpoint during one or more time slots empirically determined to be associated with the reduced level of packet contention in step (2).

Claim 19 and all of its dependent claims are allowable over the prior art of record since the cited references taken individually or in combination fail to particularly teach or suggest an apparatus having a network interface and a processor programmed with computer-executable instructions that, when executed, perform the steps of:

- (1) transmitting a plurality of test packets at a first priority level, wherein the test packets are transmitted at a data rate that emulates data packets that are to be transmitted between endpoints on the network;
- (2) on the basis of step (1), evaluating which of the plurality of different time slots corresponds to favorable network traffic conditions; and
- (3) transmitting a plurality of data packets comprising one or more of voice data, video data, and TDM-over-IP data over the network at a second priority level using one or more favorable time slots evaluated in step (2), wherein the second priority level is higher than the first priority level.

Claim 31 and all of its dependent claims are allowable over the prior art of record since the cited references taken individually or in combination fail to particularly teach or suggest a system comprising at least three network

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endpoints that contend for resources in a shared packet switch, each endpoint comprising a processor programmed with computer-executable instructions that, when executed, perform steps including:

- (1) transmitting a plurality of test packets over the network during a plurality of different time slots, wherein each test packet has a priority level that is lower than a priority level assigned to data packets that are to be transmitted between endpoints on the network, and wherein the test packets are transmitted so as to emulate data packets that are to be transmitted between the endpoints on the network;
- (2) on the basis of step (1), evaluating which of the plurality of different time slots corresponds to favorable network traffic conditions; and
- (3) synchronously transmitting a plurality of data packets comprising one or more of voice data, video data, and TDM-over-IP data over the network using one or more favorable time slots evaluated in step (2).

Claim 37 is allowable over the prior art of record since the cited references taken individually or in combination fail to particularly teach or suggest a method of transmitting packets over an Internet Protocol (IP) network comprising a plurality of network switches, comprising:

- (1) establishing a time reference frame comprising a plurality of time slots corresponding to candidate times during which packets may be transmitted between network endpoints on the network;

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(2) transmitting over a plurality of the time slots a plurality of test packets from a first endpoint on the IP network to a second endpoint on the IP network, wherein the plurality of test packets are transmitted at a first priority level and are transmitted at a data rate corresponding to an expected rate to be experienced during a subsequent communication between the first and second endpoints on the IP network,

(3) evaluating, at one of the first and second endpoints, packet statistics for the test packets, wherein the packet statistics are indicative of contention conditions in one or more of the plurality of network switches,

(4) identifying one or more time slots that correspond to a low level of contention conditions; and

(5) synchronously transmitting based on the time reference frame a plurality of data packets comprising one or more of voice data, video data, and TDM-over-IP data during the one or more of the time slots identified in step (4) that correspond to the low level of contention conditions in the one or more network switches, wherein the data packets are transmitted at a priority level higher than the first priority level of the test packets.

It is noted that that the prior arts cited in the Final Office Action mailed on 6/17/08 teach sending test packets. In particular, Ishioka'422 teaches sending test packets at different time locations with the sole purpose of picking the best period to transmit data across the network based on identifying the correlation for each possible route between

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the endpoints with the times the routes are less congested and eventually derives for a given endpoint the best time period or time interval or time slot (i.e. non-TDM) to transmit data. Ishioka'422 fails to expressively disclose sending test packets at different time slots. Further Ishioka'422 fails to disclose sending a test packet with different levels of priorities.

Klassen'137 discloses sending test packets with different priorities in a given time interval. Klassen'137 fails to disclose sending test packets with different priorities in different time slots.

The prior arts cited by the Examiner in the Final Office Action mailed on 6/17/08 taken individually or in combination fail in particular to teach the combined limitations reciting "...transmitting from a network endpoint a plurality of test packets over the network during a plurality of different time slots," and "...transmitting a plurality of data packets comprising one or more of voice data, video data, and TDM-over-IP data over the network at a priority level higher than the test packets using one or more favorable time slots evaluated in step (2)." because none of the prior arts cited including Ishioka'422 and Klassen'137 disclose sending test packets with priority in different time slots wherein these time slots are used to transmit a plurality of data packets comprising one or more of voice data, video data, and TDM-over-IP data over the network. The time slots used for transporting voice data, video data, and TDM-over-IP data over the network in TDM or switching have special definition as persuasively argued by Applicant in the Remarks filed on 12/05/08 on page 11 and is different from Ishioka'422's use of time slot in Column 7, Lines 45-55.

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5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HABTE MERED whose telephone number is (571)272-6046. The examiner can normally be reached on Monday to Friday 9:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Aung S. Moe can be reached on 571 272 7314. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Aung S. Moe/
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3-14-09